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ABSTRACT

This module is one of twelve individualized performance-based modules, each based on a major competency needed by vocational administrators for effectively administering vocational education in local education agencies. Designed to prepare local leaders for evaluation activities in vocational centers, comprehensive high schools, and community colleges, the module focuses on developing competency in the following areas: determining instructional evaluation needs, designing an instructional evaluation system, developing a cost-benefit profile, and utilizing evaluation results in program planning and instructional improvement. The activities are based on having the learner read suggested material related to the subject area. Module content is organized as follows: introductory section, terminal objective, summary of content, procedures, suggested resources, pretest, learning activities, posttest, and answer manual. (SH)

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Developing A System For
Evaluating Instruction

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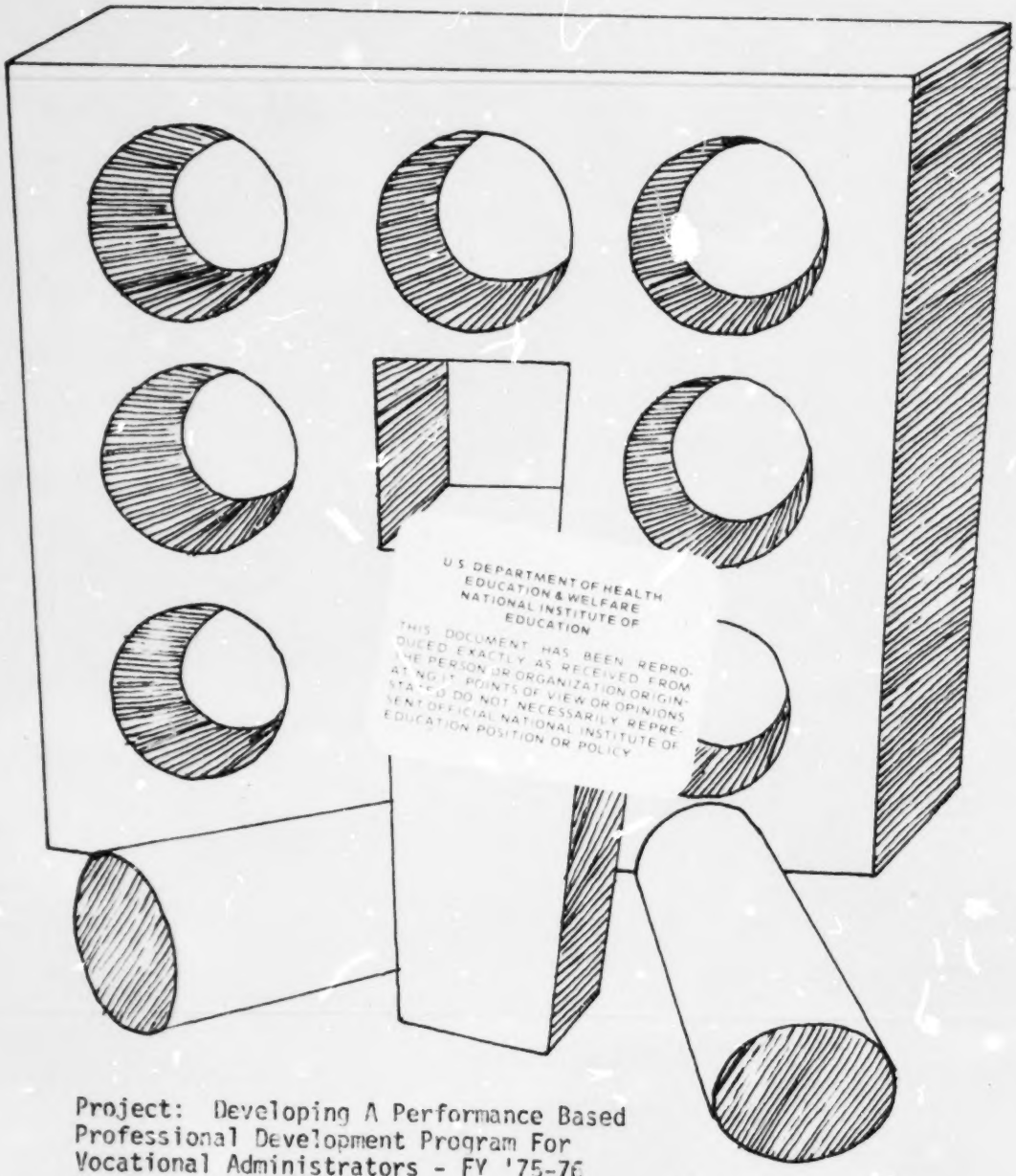

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Project: Developing A Performance Based
Professional Development Program For
Vocational Administrators - FY '75-76
Marshall University
Department of Occupational, Adult and Safety Education
Huntington, WV 25701

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Instructor's Guide for the
Use of Individualized Modules

In each of the Individualized Modules you will find all or some of the following components:

1. Introduction
2. Terminal Objective
3. Content
4. Procedures
5. Student Competency Sheet
6. Resources
7. Pre-Test and/or Post-Test
8. Learning Activities
9. Simulation
10. Answer Manual

For the most part the material is self-explanatory and if so noted, certain pages are consumable.

In some of the modules, activities other than reading and responding through written communication are required. In these instances where seminars, site visitations, workshops, etc., are required, with the instructor directing the activity, the instructor is directed to utilize the Individualized Module and to inject his/her own methods for making the activity a success.

All materials to be evaluated are to be turned into the instructor. When a student has not achieved the competency required in the specific activity, the instructor is requested to develop a plan to correct the deficiency.

## INTRODUCTION

This module concerns the evaluation of instructional programs in vocational-technical education and is designed for practical use by personnel in any vocational center of high school. It is based on the premise that the greatest benefit to be received in any evaluation effort is received only when those charged with implementing any changes brought about by the evaluations are thoroughly involved in planning and conducting the evaluation activities. This approach not only gathers evaluation data, but builds local staff expertise in and commitment to evaluation strategies and results.

As the learner progresses through the learning activities, he/she will note that strategies used allow for the evaluation to become as "theoretical" or as "practical" as the learner desires the evaluation to become. It attempts to detach the concept held by many educators (administrators, teachers, i.e.) that evaluation is simply "accreditation" visits, "consultant" activities, or "student testing." Instead, it promotes the concept that evaluation is the determination of the worth of a thing. It includes obtaining information for use in judging the worth of a program, product, procedure, or objective, or the potential utility of alternative approaches designed to attain specified objectives."[1]

Evaluation may provide the educator with one of the most important bases for decisions affecting the nature, scope, and operations of the program. An effective evaluation will point out what has happened in the past so that analysis of results may serve as a basis for planning and future action.

The effectiveness of an evaluation is dependent on the roles of the persons involved in the planning and conducting of the evaluation activities. A strong relationship exists between the success of an evaluation and the role of persons charged with

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[1] Blaine R. Worthen and James R. Sanders, Educational Evaluation: Theory and Practice, Charles A. Jones Publishing Co., Worthington, Ohio, 1973, p. 19.

implementing the findings. If the persons charged with the implementation of the results are involved in designing and conducting the evaluation, the impact value is greatly enhanced.

This module has been developed to provide vocational educators with competencies required to develop a system for evaluating instruction. It is designed to prepare local leaders for evaluation activities in vocational centers, comprehensive high schools, and community colleges.

TERMINAL OBJECTIVE

THE FOLLOWING IS WHAT YOU WILL CAPABLE OF DOING UPON SUCCESSFUL COMPLETION OF THE PACKET:

*The learner will demonstrate his/her understanding of instructional evaluation as demonstrated by his/her ability to determine instructional evaluation needs; design an instructional evaluation system; adapt and/or design instructional evaluation instruments; develop a cost-benefit profile; and utilize evaluation results in program planning and instructional improvement.*

CONTENT

On the following pages you will find:

1. Student Competency Sheet
2. Learning Activities
3. Simulation

In the Learning Activities you will find Tasks with Activities to help you accomplish these Tasks, questions to answer, self-tests to measure your progress, and model answers.

PROCEDURES

After reading the Introduction, Terminal Objective, and Content:

1. Decide whether you already possess the competencies identified in the Terminal Objective and proceed directly to the Simulation.

2. Proceed to the Simulation and assess your present skills to determine which problem pertains to the part in which you are deficient.

3. Go straight through the packet.

STUDENT COMPETENCY SHEET

Program: Vocational Administrators Curriculum

Unit: Developing A System for Evaluating Instruction

Competency Statement: Demonstrate competency in instructional evaluation by: (1) determining instructional evaluation needs, (2) designing an instructional evaluation system, (3) adapting and/or designing instructional evaluation instruments, (4) developing a cost-benefit profile, and (5) utilizing evaluation results in program planning and instructional improvement.

Learning Activities: Within this module are several different varieties of learning activities aimed at leading you to attain and demonstrate the competencies named above. These activities require reading from suggested resources, writing several reports, attending two seminars, and visiting a high school or vocational center.

Criterion Evaluation: There are specific tasks associated with the learning activities in this module. Each of these specific tasks is an enabling objective which states exactly what behavior the learner is expected to exhibit, under what conditions he/she is expected to do it, and how well it is to be done. Thus, each task statement in this module states the exact standards by which the learner's performance is going to be judged. This is the criterion evaluation.

Resources: Instructor

Local School(s) or Vocational Center Personnel

Books: (Required)

Bryam, Harold M. and Robertson, Marvin. Locally Directed Evaluation of Local Vocational Education Programs. (Third Edition). Danville, Ill.: Interstate Printers and Publishers, Inc., n.d.

Davis, Dwight and Borgen, Joe. Planning, Implementing, and Evaluating Career Preparation Programs. Bloomington, Ill.: McKnight Publishers, 1974.

Wentling, T. L. and Lawson, T. E. Evaluating Occupational Education and Training Programs. Boston, Mass.: Allyn and Bacon, Inc., 1975.

(Supplementary)

Department of the Air Force. Instructional System Development, (AF Manual 50-2). Washington, D.C.: Headquarters, U.S. Air Force, 1975.

Finn, James D., "Institutionalization of Evaluation," in Evaluation of Education, pp. 10-27. Educational Technology Series 11. Englewood Cliffs, N.J.: Educational Technology Publications, 1973.

Krathwohol, David R., "Taxonomy of Educational Objectives--Use of Cognitive and Affective Domains," in Educational Evaluation: Theory and Practice, pp. 246-268. B. W. Worthen and James R. Sanders. Worthington, Ohio; Charles A. Jones Publishing Co., 1973.

Metfessel, N. S. and Michael, Wm. B., "A Paradigm Involving Multiple Criterion Measures for the Evaluation of the Effectiveness of School Programs," in Educational Evaluation: Theory and Practice, pp. 269-289. B.W. Worthen and James R. Sanders. Worthington, Ohio: Charles A. Jones Publish. Co., 1973.

Provus, Malcolm, "Evaluation of Ongoing Programs in the Public School System," in Educational Evaluation: Theory and Practice, pp. 170-218. B. W. Worthen and James R. Sanders. Worthington, Ohio: Charles A. Jones Publishing Co., 1973.

Randall, R. S., "An Operational Application of the CIIP Model for Evaluation," in Evaluation of Education, pp. 43-47. Educational Technology Series 11, Englewood Cliffs, N.J.: Educational Technology Publications, 1973

Stewart, Don. Instruction as a Humanizing Science. Vol. III of a 3-volume series. Fountain Valley, Calif.: SLATE Services Publishers, 1976.

Stufflebeam, Daniel L., "Educational Evaluation and Decision-Making," in Educational Evaluation: Theory and Practice, pp. 128-142. B. W. Worthen and James R. Sanders. Worthington, Ohio: Charles A. Jones Publishing Co., 1973.

Stufflebeam, Daniel L., "Evaluation as Enlightenment for Decision-Making," in Educational Evaluation: Theory and Practice, pp. 143-146. B.W. Worthen and James R. Sanders. Worthington, Ohio: Charles A. Jones Publishing Co., 1973.

U. S. Dept. of Health, Education and Welfare. A Practical Guide to Measuring Project Impact on Student Achievement. Washington, D. C.: U.S. Government Printing Office, 1975. (No. 017-080-01460-2).

Worthen, Blain R., "Toward a Taxonomy of Evaluation Designs," in Evaluation of Education, pp. 28-42. Educational Technology Series 11, Englewood Cliffs, N.J.: Eductional Technology Publications, 1973.

Simulation: Simulation material for this packet is included.

Centers: The learner will be required to see the instructor to set up visitations to one high school or vocational center. The instructor will provide a map of high schools and vocational centers for learner visitation.

PRE-TEST

According to the readings:

1. State the objectives of: (a) context evaluation; (b) input evaluation; (c) process evaluation and (d) product evaluation.

2. List resources to use in instructional evaluation.

3. Discuss ten general design features of an instructional evaluation system.

4. Detail the procedures for designing an instructional evaluation system.

5. Discuss measures of learner performance for instructional evaluation in the (a) cognitive domain: (b) affective domain: (c) psychomotor domain: and (d) perceptual domain.

6. Discuss the relationship between follow-up studies and instructional evaluation.

7. List the four types of rating systems utilized in evaluating instructional personnel.

8. Outline the steps in conducting cost-benefit analysis of a vocational program.

9. Discuss utilization of evaluation results for planning and instructional improvement.

These will be written with 95% accuracy and will be turned into the instructor for evaluation.

LEARNING ACTIVITY I

Task I

THE LEARNER WILL STATE IN WRITING THE DEFINITIONS, OBJECTIVES, AND METHODS USED IN THE CONTEXT, INPUT, PROCESS, AND PRODUCT FORMS OF EVALUATION. THIS WILL BE WRITTEN WITH 95% ACCURACY AND WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION

I-A

Read:

A.1 Evaluating Occupational Education and Training Programs, T. L. Wentling & T. E. Lawson, Allyn and Bacon, Inc., Boston, Mass., 1975, pp. 24-30.

A.2 "Institutionalization of Evaluation" in Evaluation of Education, James D. Finn, Educational Technology Publications, Englewood Cliffs, N.J., 1973, pp. 10-27.

A.3 "Educational Evaluation and Decision-Making," Daniel L. Stufflebeam, in Educational Evaluation: Theory and Practice, B. W. Worthen and James R. Sanders, Charles A. Jones Publishing Co., Worthington, Ohio, 1973, pp. 128-142.

I-B

After completing Activity A, the learner will state in writing the definitions, objectives, and methods used in the context, input, process, and product forms of evaluation as outlined in the reading material. This will be written with 95% accuracy and will be turned in to the instructor for evaluation.

If you successfully completed the task in Learning Activity I, you should proceed to Learning Activity II. If you need to acquire more knowledge or skill in order to perform as expected in Task I, reread the material in I-A and try I-B again. If you still feel you need more information to complete the Task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY II

Task II

THE LEARNER WILL LIST IN WRITING THE RESOURCES WHICH MAY BE USED IN ORGANIZING AND CONDUCTING EVALUATIONS. THIS WILL BE WRITTEN WITH 95% ACCURACY AND WILL BE TURNED IN TO THE INSTRUCTOR FOR EVALUATION.

II-A

Read:

A.1 Locally Directed Evaluation of Local Vocational Education Programs, Harold M. Byram and Marvin Robertson, Interstate Printers and Publishers, Inc. (Third Edition), Danville, Ill., pp. II: 1-5; III:1-9.

Additional Suggested Readings

A.2 Planning, Implementing, and Evaluating Career Preparation Programs, Dwight Davis and Joe Borgen, McKnight Publishers, Bloomington, Ill., 1974, pp. 393-402.

A.3 "Evaluation of Ongoing Programs in Public School Systems," Malcolm Provus in Educational Evaluation: Theory and Practice, B. R. Worthen and J. R. Sanders, Charles A. Jones Publishing Co., Worthington, Ohio, 1973, pp. 170-218.

II-B

After completing II-A, the learner will list in writing the resources which may be used in organizing and conducting evaluations. This will be written with 95% accuracy and will be turned in to the instructor for evaluation.

If you successfully completed the task in Learning Activity II, you should proceed to Learning Activity III. If you need to acquire more knowledge or skill in order to perform as expected in Task II, reread the material in II-A and try II-B again. If you still feel you need more information to complete the task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY III

Task III

THE LEARNER WILL STATE IN WRITING AND DISCUSS THE TEN GENERAL DESIGN FEATURES OF AN INSTRUCTIONAL EVALUATION SYSTEM. THIS WILL BE WRITTEN WITH 95% ACCURACY AND WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

III-A

Read:

A.1 Evaluating Occupational Education and Training Programs, T. L. Wentling & T. E. Lawson, Allyn and Bacon, Inc., Boston, Mass., 1975, pp. 38-45.

Additional Suggested Readings

A.2 "Toward a Taxonomy of Evaluation Designs," Blain R. Worthen, in Evaluation of Education, James D. Finn, Educational Technology Publications, Englewood Cliffs, N.J., 1973, pp. 28-42.

A.3 "Evaluation as Enlightenment for Decision-Making," D.L. Stufflebeam, in Educational Evaluation: Theory and Practice, B. W. Worthen and James R. Sanders, Charles A. Jones Publishing Co., Worthington, Ohio, 1973, pp. 143-156.

III-B

After completing the reading in III-A, the learner will state in writing and discuss the ten general design features of an instructional evaluation system. This will be written with 95% accuracy and turned into the instructor for evaluation.

If you successfully completed the task in Learning Activity III, you should proceed to Learning Activity IV. If you need to acquire more knowledge or skill in order to perform as expected in Task III, reread the material in III-A and try III-B again. If you still feel you need more information to complete the task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY IV

Task IV

THE LEARNER WILL CATEGORIZE IN WRITING THE PROCEDURES FOR DESIGNING AN EVALUATION SYSTEM. THIS WILL BE WRITTEN WITH 95% ACCURACY AND WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

IV-A

Read:

A.1 Evaluating Occupational Education and Training Programs, T. L. Wentling and T. E. Lawson, Allyn and Bacon, Inc., Boston, Mass., 1975, pp. 45-59.

Additional Suggested Readings

A.2 Locally Directed Evaluation of Local Vocational Education Programs, H. M. Byram and H. Robertson, Interstate Printers and Publishers, Inc. (Third Edition), Danville, Ill., pp. 11:1-5.

A.3 "An Operational Application of the CIPP Model for Evaluation," R. S. Randall, in Evaluation of Education, James D. Finn, Educational Technology Publications, Englewood Cliffs, N.J., 1973, pp. 43-47.

A.4 Planning, Implementing, and Evaluating Career Preparation Programs, Dwight Davis and Joe Borgen, McKnight Publishing Co., Bloomington, Ill., 1974, pp. 393-402.

IV-B

After completing the reading in IV-A, the learner will categorize in writing the procedures for designing an evaluation system. This will be written with 95% accuracy and turned into the instructor for evaluation.

If you successfully completed the task in Learning Activity IV, you should proceed to Learning Activity V. If you need to acquire more knowledge or skill in order to perform as expected in Task IV, reread the material in IV-A and try IV-B again. If you still feel you need more information to complete the task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY V

Task V

THE LEARNER WILL PARTICIPATE IN A SEMINAR (NOTIFICATION WILL BE MADE BY MAIL FOR DATE AND TIME) DEALING WITH PROCEDURES FOR EVALUATION VISITS TO HIGH SCHOOLS AND/OR VOCATIONAL CENTERS

V-A

Read:

A.1 Locally Directed Evaluation of Local Vocational Education Programs, H. M. Byram and M. Robertson, Interstant Printers and Publishers, Inc. (Third Edition), Danville, Ill., Chapter IV.

A.2 Planning, Implementing, and Evaluating Career Preparation Programs, Dwight Davis and Joe Borgen, McKnight Publishing Co., Bloomington, Ill., 1974, pp. 393-402.

Complete the Self-Test

The learner will participate in a seminar which will cover:

(1) Location of high schools and vocational centers for visits.
(2) Readings from activities.
(3) Answers to the Self-Test.
(4) Format for reporting past and current evaluation activities of high schools and vocational centers.
(5) Discussion with local personnel concerning evaluation activities.
(6) Data to be collected during visitation.

After completing Learning Activity V, continue to Learning Activity VI.

SELF-TEST

A. Having read the assigned material in the Activities, apply the forms of evaluation to the following areas and label them (c) context, (e) evaluation, (i) input evaluation, (p) process evaluation, or (P) product evaluation:

1. Measurement of learner accomplishment.
2. Determing unmet needs of students and the community.
3. Determing interpersonal relationship among school staff.
4. The follow-up survey.
5. Assessment of budget.
6. Determining alternate strategies for achieving goals.
7. Formulating goals and objectives for a program.
8. Identifying problems in program implementation.
9. Identifying capabilities of the school system.
10. Relating outcomes to objectives.

B. Outline the procedures for designing an evaluation system.

Self-Test Answer Sheet

A- 1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

B-

LEARNING ACTIVITY VI

Task VI

THE LEARNER WILL VISIT A HIGH SCHOOL ( OR A VOCATIONAL CENTER) WITH FIVE OR MORE VOCATIONAL PROGRAMS. THE LEARNER WILL WRITE AN ANALYSIS OF THE CURRENT AND PAST EVALUATION ACTIVITIES AND RESULTS, FROM THE HIGH SCHOOL OR VOCATIONAL CENTER VISITED. THE LEARNER WILL GATHER DATA WHICH WILL DESCRIBE THE VOCATIONAL PROGRAMS AND COURSES. THE LEARNER WILL DEVELOP A CONCISE REPORT WHICH DESCRIBES EXISTING INSTRUCTIONAL PROGRAMS, STATES PHILOSOPHY AND OBJECTIVES, IDENTIFIES CURRENT EVALUATIVE DATA, ANALYZES DATA, AND FORMULATES QUESTIONS NECESSARY FOR DESIGNING A MORE THOROUGH EVALUATION. THESE WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

VI-A

The learner will visit a high school or vocational center and will discuss with local personnel the past and current evaluation activities. While at the school or center, the learner will write an analysis of the evaluation activities and obtain the following information:

1. Results of past evaluation efforts;
2. Data describing vocational courses and programs;
3. Statements of philosophy and objectives;
4. Budget information by programs; and
5. Samples of evaluation instruments in use.

This visit and/or visits will be arranged by the instructor.

VI-B

Upon completion of the visit to the high school or vocational center, the learner will develop a written report which will include an analysis of information concerning the visit. This will be turned into the instructor for evaluation.

If you successfully completed the Task in Learning Activity VI, you should proceed to Learning Activity VII. If you need to acquire more knowledge or skill in order to perform as expected in Task VI, reread the material in VI-A and try VI-B again. If you still feel you need more information to complete the Task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY VII

Task VII

THE LEARNER WILL SELECT AND/OR DEVELOP APPROPRIATE MEASURES OF LEARNER PERFORMANCE IN THE COGNITIVE, AFFECTIVE, PSYCHOMOTOR, AND PERCEPTUAL DOMAINS IN EACH PROGRAM AREA FOR THE HIGH SCHOOL OR VOCATIONAL CENTER VISITED. A COPY OF THESE MEASURES WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

Read:

A.1 Evaluating Occupational Education and Training Programs, T.L. Wentling & T. E. Lawson, Allyn and Bacon, Inc., Boston, Mass., 1975, pp. 66-122.

Additional Suggested Readings

A.2 A Practical Guide to Measuring Project Impact on Student Achievement, U.S. Dept. of Health, Education, and Welfare, Office of Education, U.S. Government Printing Office, Washington, D.C., 1975, pp. 75-92.

A.3 "Taxonomy of Educational Objectives-Use of Cognitive and Affective Domains," David R. Krathwohl, in Educational Evaluation: Theory and Practice, B. W. Worthen and James R. Sanders, Charles A. Jones Publishing Co., Worthington, Ohio, 1973, pp. 246-268.

A.4 "A Paradigm Involving Multiple Criterion Measures for the Evaluation of the Effectiveness of School Programs," N. S. Metfessel and Wm. B. Michael, in Educational Evaluation: Theory and Practice, B. W. Worthen and James R. Sanders, Charles A. Jones Publishing Company, Worthington, Ohio, 1973, pp. 269-289.

A.5 Instruction as a Humanizing Science: Vol. III, Don Stewart, SLATE Services Publishers, Fountain Vallen, Calif., 1976, pp. 367-634.

After completing the reading in VII-A, the learner will select and/or develop appropriate measures of learner performance in the cognitive, affective, psychomotor, and perceptual domains in each program area for the high school or vocational center visited. These will be turned into the instructor for evaluation.

If you successfully completed the task in Learning Activity VII, you should proceed to Learning Activity VIII. If you need to acquire more knowledge or skill in order to perform as expected in Task VII, reread the material in VII-A and try VII-B again. If you still feel you need more information to complete the Task, see your instructor to develop a plan to correct your deficiences.

LEARNING ACTIVITY VIII

Task VIII

THE LEARNER WILL STATE IN WRITING THE RELATIONSHIP BETWEEN FOLLOW-UP AND INSTRUCTIONAL EVALUATION AND THE PROCESS FOR CONDUCTING FOLLOW-UP STUDIES. THIS WILL BE WRITTEN WITH 95% ACCURACY AND WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

VIII-A

Read:

A.1 Locally Directed Evaluation of Local Vocational Education Programs, Harold M. Byram and Marvin Robertson, Interstate Printers and Publishers, Inc. (Third Edition), Danville, Ill., pp. V:1-12.

A.2 Evaluating Occupational Education and Training Programs, T. L. Wentling & T. E. Lawson, Allyn and Bacon, Inc., Boston, Mass., 1975, pp. 123-192.

VIII-B

After completing the reading in VIII-A, the learner will state in writing the relationship between follow-up and instructional evaluation, and outline the process for conducting follow-up studies.

If you successfully completed the task in Learning Activity VIII, you should proceed to Learning Activity IX. If you need to acquire more knowledge or skill in order to perform as expected in Task VIII, reread the material in VIII-A and try VIII-B again. If you still feel you need more information to complete the task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY IX

Task IX

THE LEARNER WILL SELECT AND/OR DEVELOP APPROPRIATE FOLLOW-UP INSTRUMENTS FOR USE BY STUDENTS AND EMPLOYERS IN EACH PROGRAM AREA IN THE HIGH SCHOOL OR VOCATIONAL CENTER VISITED. A COPY OF THESE INSTRUMENTS WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

IX-A

Read:

A.1 Planning, Implementing, and Evaluating Career Preparation Programs, Dwight Davis and Joe Borgen, McKnight Publishers, Bloomington, Ill., 1974, pp. 405-416.

A.2 Locally Directed Evaluation of Local Vocational Education Programs, Harold M. Byram and Marvin Robertson, Interstate Printers and Publishers, Inc. (Third Edition), Danville, Ill., pp. x:59, 13-14, 25.

A.3 Evaluating Occupational Education and Training Programs, T. L. Wentling & T. E. Lawson, Allyn and Bacon, Inc., Boston, Mass., 1975, pp. 125-192.

IX-B

After completing the reading in IX-A, the learner will select and/or develop one appropriate follow-up instrument for use by students in each program area in the high school or vocational center visited. These will be turned into the instructor for evaluation.

IX-C

After completing the reading in IX-A, and the exercise in Activity B, the learner will select and/or develop one appropriate follow-up instrument for use by employers in each program area in the high school or vocational center visited. These will be turned into the instructor for evaluation.

If you successfully completed the task in Learning Activity IX, you should proceed to Learning Activity X. If you need to acquire more knowledge or skill in order to perform as expected in Task IX, reread the material in IX-A and try IX-B and-C again. If you still feel you need more information to complete the Task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY X

Task X

THE LEARNER WILL STATE IN WRITING, AND DISCUSS, THE FOUR TYPES OF RATING SYSTEMS UTILIZED IN EVALUATING INSTRUCTIONAL PERSONNEL. THIS WILL BE WRITTEN WITH 95% ACCURACY AND WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

X-A

Read:

A.1 Evaluating Occupational Education and Training Programs, T. L. Wentling and T. E. Lawson, Allyn and Bacon, Inc., Boston, Mass., 1975, pp. 229-245.

Additional Suggested Reading

A.2 Planning, Implementing, and Evaluating Career Preparation Programs, Dwight Davis and Joe Borgen, McKnight Publishers, Bloomington, Ill., 1974, pp. 433-440.

A.3 Instruction as a Humanizing Science: Vol. III, Don Stewart, SLATE Services Publishers, Fountain Valley, Calif., 1976, pp. 956-1052.

X-B

After completing the reading in Activity A, the learner will state in writing and discuss the four types of rating systems utilized in evaluating instructional personnel. This will be written with 95% accuracy and will be turned into the instructor for evaluation.

X-C

After completing the reading in X-A and the exercise in X-B, the learner will demonstate his/her competency by selecting and/or developing an instrument for faculty evaluation in the high school or vocational center visited. This will be turned into the instructor for evaluation.

If you successfully completed the task in Learning Activity X, you should proceed to Learning Activity XI. If you need to acquire more knowledge or skill in order to perform as expected in Task X, reread the material in X-A again, and try X-B and C again. If you still feel you need more information to complete the Task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY XI

Task XI

THE LEARNER WILL DEMONSTRATE BY EXAMPLE A CORRECTLY DESIGNED PLAN FOR EVALUATING INSTRUCTIONAL PERSONNEL IN THE HIGH SCHOOL OR VOCATIONAL CENTER VISITED. HE/SHE WILL SELECT FROM METHODS OUTLINED IN THE READINGS AND SELECT AND/OR DEVELOP INSTRUMENTS FOR USE IN EVALUATION ACTIVITIES. THE PLAN, WHICH INCLUDES INSTRUMENTS, WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

XI-A

Read:

A.1 Planning, Implementing, and Evaluating Career Preparation Programs, Dwight Davis and Joe Borgen, McKnight Publishers, Bloomington, Ill., 1974, pp. 417-440.

A.2 Evaluating Occupational Education and Training Programs, T. L. Wentling & T. E. Lawson, Allyn and Bacon, Inc., Boston, Mass., 1975, pp. 245-279.

Additional Suggested Reading

A.3 Instruction as a Humanizing Science-Vol. III, Don Stewart, SLATE Services, Publishers, Fountain Valley, Calif., 1976, pp. 956-1014.

A.4 Instructional System Development, Chapter VI, Department of the Air Force, Wash., D.C., 1975, pp. VI-1-5.

XI-B

After completing the reading in XI-A, the learner will design a written plan for evaluating instructional personnel in the high school or vocational center visited. The learner will select and/or develop appropriate instruments to be used in the evaluation activities. The plan and instruments will be turned into the instructor for evaluation.

If you successfully completed the Task in Learning Activity XI, you should proceed to Learning Activity XII. If you need to acquire more knowledge or skill in order to perform as expected in Task XI, reread the material in XI-A, and try XI-B again. If you still feel you need more information to complete the task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY XII

Task XII

THE LEARNER WILL DEMONSTRATE BY EXAMPLE A CORRECTLY DESIGNED PLAN FOR EVALUATING FACILITIES IN THE HIGH SCHOOL OR VOCATIONAL CENTER VISITED. THE PLAN, WHICH INCLUDES INSTRUMENTS WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

XII-A

Read:

A.1 Planning, Implementing, and Evaluating Career Preparation Programs, Dwight Davis and Joe Borgen, McKnight Publishers, Bloomington, Ill., 1974, pp. 441-449.

XII-B

After completing the reading in XII-A, the learner will design a written plan for evaluating facilities in the high school or vocational center visited. This plan will include instruments selected and/or developed for use in the plan. This will be turned into the instructor for evaluation.

If you successfully completed the task in Learning Activity XII, you should proceed to Learning Activity XIII. If you need to acquire more knowledge or skill in order to perform as expected in Task XII, reread the material in XII-A and try XII-B again. If you still feel you need more information to complete the task, see your instrument to develop a plan to correct your deficiencies.

LEARNING ACTIVITY XIII

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| Task XIII | THE LEARNER WILL BECOME AWARE OF COST ANALYSIS EVALUATION BY READING CHAPTER 8, "COST ANALYSIS EVALUATION," IN EVALUATING OCCUPATIONAL EDUCATION AND TRAINING PROGRAMS, ALLYN AND BACON, INC., BOSTON, MASS., 1975, pp. 282-32[illegible] |
| XIII-A | Complete the Self-Test |
| XIII-B | The learner will assess his comprehension of cost analysis evaluation by evaluating the self-test with the material presented in the reading. |

After completing the task in Learning Activity XIII, you should proceed to the Simulation. Directions are provided in the Simulation. If you need to acquire more knowledge for Task XIII, reread the material and try XIII-A and-B again.

SELF-TEST

1. List five examples each of:

Program Development Costs

a)

b)

c)

d)

e)

Program Operation Costs

f)

g)

h)

i)

j)

2. Classify and define the following benefits accruable from occupational programs:

a) Economic benefits

b) Noneconomic benefits

c) Intermediate benefits

3. Detail the steps in compiling data for cost-benefit analysis of occupational programs.

Step A

Step B

Step C

Step D

Step E

Step F

Step G

Step H

LEARNING ACTIVITY XIV

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|---|---|
| Task XIV | THE LEARNER WILL DEMONSTRATE HIS/HER ABILITY TO CONDUCT A COST-BENEFIT ANALYSIS BY COMPLETING A COST-BENEFIT PROFILE ON ONE PROGRAM IN THE HIGH SCHOOL OR VOCATIONAL COMPLEX VISITED. THIS WILL BE COMPLETED AND TURNED INTO THE INSTRUCTOR FOR EVALUATION. |
| XIV-A | Read and become familiar with the techniques and forms as outlined in Planning, Implementing, and Evaluating Career Preparation Programs, McKnight Publishing Co., Bloomington, Ill., 1974, pp. 455-460, for conducting a cost-benefit analysis. |
| XIV-B | After completing the reading in XIV-A, the learner will use the techniques and forms for developing a cost-benefit profile on one program in the high school or vocational complex visited. This will be completed and turned into the instructor for evaluation. |

If you successfully completed the task in Learning Activity XIV, you should proceed to Learning Activity XV. If you need to acquire more knowledge or skill in order to perform as expected in Task XIV, reread the material in XIV-A and try XIV-B again. If you still feel you need more information to complete the task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY XV

Task XV

HAVING REVIEWED ALL THE READING MATERIAL, THE LEARNER WILL DISCUSS, EITHER ORALLY OR IN WRITING, THE UTILIZATION OF EVALUATION RESULTS FOR PLANNING AND INSTRUCTIONAL IMPROVEMENT.

XV-A

Read:

Evaluating Occupational Education and Training Programs, T. L. Wentling and T. E. Lawson, Allyn and Bacon, Inc., Boston, Mass., pp. 326-350.

XV-B

After completing the reading in XV-A, the learner will discuss, either orally or in writing, the utilization of evaluation results for planning and instructional improvement. This will either be orally reported to the instructor, or if written, turned in for evaluation.

If you successfully completed the task in Learning Activity XV, you should proceed to Learning Activity XVI. If you need to acquire more knowledge or skill in order to perform as expected in Task XV, reread the material in XV-A and try XV-B again. If you still feel you need more information to complete the task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY XVI

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|---|---|
| Task XVI | THE LEARNER WILL PARTICIPATE IN A SEMINAR DEALING WITH INDIVIDUAL EVALUATION PLANS DEVELOPED FOR EACH HIGH SCHOOL OR VOCATIONAL CENTER VISITED. (NOTIFICATION WILL BE MADE BY MAIL FOR DATE AND TIME.) HE/SHE WILL PRESENT AN INSTRUCTIONAL EVALUATION PLAN FOR THE HIGH SCHOOL OR VOCATIONAL CENTER VISITED. |
| XVI-A | The learner will compile materials (data, forms, analyses, etc.) developed in Learning Activities VI, VII, IX, XI, XII, and XIV for inclusion in an instructional evaluation plan. The learner will also develop time lines for evaluation activities, personnel utilization, and develop an instructional evaluation budget to include in the plan. The plan will be developed for presentation at a seminar where participants will evaluate the plan and make recommendations for increasing its effectiveness. |
| XVI-B | The learner will participate in a seminar which will cover individual instructional plans developed for each high school or vocational center visited. |

After completing Learning Activity XVI, you are to evaluate your ability to achieve the competencies identified in the Terminal Objective by reviewing your Instructional Evaluation Plan.

POST-TEST

According to the readings:

1. State the objectives of: (a) context evaluation; (b) input evaluation; (c) process evaluation and (d) product evaluation.

2. List resources to use in instructional evaluation.

3. Discuss ten general design features of an instructional evaluation system.

4. Detail the procedures for designing an instructional evaluation system.

5. Discuss measures of learner performance for instructional evaluation in the (a) cognitive domain: (b) affective domain: (c) psychomotor domain; and (d) perceptual domain.

6. Discuss the relationship between follow-up studies and instructional evaluation.

7. List the four types of rating systems utilized in evaluating instructional personnel.

8. Outline the steps in conducting cost-benefit analysis of a vocational program.

9. Discuss utilization of evaluation results for planning and instructional improvement.

These will be written with 95% accuracy and will be turned into the instructor for evaluation.

# Developing a System for Evaluating Instruction

ANSWER MANUAL

Marshall University
Department of Occupational, Adult and Safety Education
Huntington, West Virginia

This booklet will provide the instructor with directions on how to conduct courses using the Competency-Based Learning Module process.

The Learning Module contains an Introduction, procedure page, pre- and post-tests, terminal objectives, tasks, and activities to complete the tasks. The Learning Module is self-explanatory and if so noted, certain pages are consumable.

In some of the modules, activities other than reading and responding through written communication are required. In these instances where seminars, site visitations, workshops, etc., are required, with the instructor directing the activity, the instructor is directed to utilize the Learning Module and to inject his own methods for making the activity a success.

All materials to be evaluated are to be turned into the instructor. When a student has not achieved the competency required in the specific activity, the instructor is requested to develop a plan to correct the deficiency.

Answers to Pre-Test and Post-Test

1. (a) The objective of context evaluation is: "to define the educational environment, to identify student and other needs, to delineate problems, and to formulate goals."

   (b) The objective of input evaluation is: "to identify and assess alternative strategies for achieving goals or overcoming problems which are identified in context evaluation."

   (c) The objective of process evaluation is: "to observe programs operation, attempting to ascertain procedural events and activities and to identify problems in design and implementation."

   (d) The objective of product evaluation is: "to assess program outcomes and to relate them to context, input, and process evaluation."

   (Evaluation Occupational Education and Training Programs - p. 25)

2. Resources to use in instructional evaluation are:

   (a) leadership

   (b) faculty and staff involvement

   (c) citizen involvement

   (d) consultants

   (Locally Directed Evaluation of Local Vocational Education Programs - p. III:1-11)

3. The ten general design features of an instructional evaluation system are:

   (a) Commitment -- is the most essential feature of the evaluation system. All individuals at all levels of the educational program or component under consideration must see the evaluation in a positive light. Individuals' commitment can only be obtained if they are involved in the initial development of plans for evaluation and not simply have the plans imposed upon them without consideration.

(b) Consultative purpose -- essentially, services must be provided for those who are instrumental in program operations. Consultative services, to have the greatest impact, should provide information relative to the strengths and weaknesses of individual programs. Suggestions for improvements from consultative services are more likely to be implemented if they help each individual involved improve conditions for which he/she is held responsible.

(c) Holistic focus -- "which requires an accurate and useful evaluation of an institution, program, course, or course segment, requires that it be observed as a whole, over and above observation of its individual components."

(d) Involvement -- in an evaluation system should include all groups closely related to the educational segment under consideration. The groups may include administrative staff, instructional staff, representatives from the community, experts, students, etc.

(e) Broad data base -- a necessary feature of any evaluation system. It should include process, product, and observer data for a comprehensive view of the program.

(f) Systematic recording -- a major feature of an evaluation which requires a means for complete, systematic, and comprehensive recording of all data collected.

(g) Judgment -- is required in the determination of worth of the specific program(s) or components in the evaluation. Data gathered and presented without judgment made at crucial points will not bring out the strengths and weaknesses of the program.

(h) Feedback -- is the communication of judgment and data information regarding the evaluation focus back to the decision makers. The feedback may be in the form of reports, summary conferences, and planning meetings.

(i) Adaptability -- can be applied to all occupational training programs in the evaluation. The evaluation system should allow for individual differences in programs.

(j) Meta evaluation -- an evaluation of the evaluation system itself. It requires that the purpose, processes and outcomes of the evaluation be monitored throughout development and implementation.

(Evaluating Occupational Education and Training Programs -- pp. 38-45)

4. The procedures for designing and evaluation system are:

(a) Focusing the evaluation -- spelling out the objectives and defining policies which govern the evaluation. It includes determining the audience of the evaluation, identifying the decision levels, projecting the decision situations, and the formulation of evaluation questions.

(b) Selecting appropriate evaluation activities --requires the isolation of information needed for answering the proposed evaluation questions. When the information needed is determined, then specific activities can be designed.

(c) Structuring evaluation activities -- including (1) personnel involvement (planning, assigning, and informing personnel regarding specific evaluation activities. (2) Identifying activities subtasks (to facilitate distribution of staff, sequencing activities, and determining time schedule).

(d) Structuring evaluation outcomes -- define audience of evaluation report; determine format for reporting data, as well as conclusions recommendations and solutions.

(e) Developing management evaluation objectives --a means of communicating evaluation activities to all involved by stating in writing both broad and specific objectives to be completed at a specified future date. Objectives should state what is required of program personnel.

(f) Incorporating a means of meta evaluation-- a plan for monitoring the purposes, processes, and outcomes of the evaluation system throughout all stages -- an evaluation of the evaluation system.

(Evaluating Occupational Education and Training Programs -- pp. 45-59)

5. (a) Cognitive -- Two classifications of measurable outcomes are (1) knowledge and intellectual abilities and (2) skills. These classifications range from a measure of simple recall of factual information through complex levels of comprehension, application, etc. Methods of measuring include recognition items (multiple choice, true-false, or matching) and constructed response items (completion, short answer, definition, and essay).

   (b) Affective -- Measures attitudinal factors such as feeling, emotion, or indications of acceptance or rejection. These factors may be assessed through many of the same methods of measurement used for cognitive abilities. These measurements are vital to determining whether instruction is compatible with the learner's attitude and values. Attitudinal measurements include group membership, surveys and questionnaires, attitude scales, Likert Sacel, Thurstone-type scales, Q-Sort technique.

   (c) Psychomotor -- Measures competencies in the physical performance of an occupational skill or task. Measurement requires that a given job situation be simulated both in terms of testing conditions and operations performed. Examples of performance measures are work samples, rating scales, and critical incident.

   (d) Perceptual --- involves measurements to determine sensation, figure perception, symbol perception, perceptions of meaning, and perception of performance. Measures used for psychomotor skills are applicable also in this domain.

   (Evaluating Occupational Education and Training Programs -- pp. 71-108)

6. Information obtained from follow-up studies may indicate a need for changes in content of program objectives and teaching methods; instructional evaluation may be a tool for confirming or verifying a need for these changes in an instructional program. Both follow-up studies and instructional evaluation, properly carried through, will show strengths and weaknesses of a program and point up needs for changes.

   (Locally Directed Evaluation of Local Vocational Education Programs -- p. V:1); Evaluating Occupational Education and Training Programs -- p. 153)

7. Four types of rating systems are:

   1. Administrator or Supervisor Ratings
   2. Colleague or Peer Rating
   3. Learner or Student Rating
   4. Self-Evaluation

   Evaluating Occupational Education and Training Programs -- pp. 240-245)

8. Steps in conducting a cost-benefit analysis are:

   1. Analyze and formulate program outcome (benefits).
   2. Review program outcomes with occupational advisory committee or divisional management.
   3. Determine data and records that should be utilized for intermittant cost-benefit evaluation.
   4. Formulate a method to record data.
   5. Formulate a form for calculating program costs.
   6. Compile benefit data.
   7. Calculate a cost-benefit profile.
   8. Determine situations for decision making.

   (Steps are discussed in detail in Evaluating Occupational Education and Training Programs -- pp. 305-309)

9. Evaluation results which come from context evaluation activities can be utilized in decisions concerning instructional resources, course objectives, revision of programs, and in determing student needs. Utilization of input evaluation results aids in decision making in determining kinds of programs, materials, equipment, and staffing. Process evaluation results are used in the implementation of programs and courses (especially in implementing change within the system). Product evaluation results are utilized in planning and/or revising outcomes of the instructional program.

   (Evaluating Occupational Education and Training Programs -- p. 340)

## ANSWERS TO LEARNING ACTIVITIES

### LEARNING ACTIVITY I, II, III, IV

The information called for can be found in Activity A (the readings) of each Learning Activity. In addition to required readings, under most activities additional suggested readings are listed to give the student a broader base of information.

### LEARNING ACTIVITY V

No grade is given. Students are required to attend the seminar. The main intent of the seminar is to prepare the students for visits to high schools and/or vocational centers for the purpose of gathering data needed for instructional evaluation of programs.

### LEARNING ACTIVITY VI

The analyses, data, and report submitted by the student will be evaluated by the instructor for accuracy and completeness of information obtained and for understanding of how the information is to be utilized in the evaluation process.

### LEARNING ACTIVITY VII

Measures turned into the instructor for evaluation should be analyzed for accuracy in measuring the specific domain for which they are developed and should be consistent with those measures specified in the readings.

### LEARNING ACTIVITY VIII

The information called for should be evaluated for understanding on the part of the student, regarding follow-up studies, how they are conducted, and the relationship between follow-up studies and instructional evaluation.

### LEARNING ACTIVITY IX

The follow-up instruments should be evaluated for appropriateness and comprehensiveness. Sample instruments are found in readings.

LEARNING ACTIVITY X, XI, XII

The instrument for faculty evaluation will be evaluated to determine its accuracy as an example of the rating system chosen by the student. The plans and instruments for evaluating instructional personnel and facilities will be evaluated for comprehensiveness and appropriateness. These plans and instruments should follow outline given in readings.

LEARNING ACTIVITY XIII

No grade is given. Learner is prepared for succeeding Activities when there is a thorough understanding of readings listed, and after having completed Self-Test.

LEARNING ACTIVITY XIV

The cost-benefit profile will be analyzed to determine student's understanding of program development costs, program operational expenses and program benefits and how they are derived in the profile. This information is outlined in the reading.

LEARNING ACTIVITY XV

The discussion or written report by the student will reflect to the instructor the student's basic understanding of the purpose of instructional evaluation, how it is accomplished, and how the results may be utilized for instructional improvement. Information given may be from the reading listed, but will include information found in much of the reading required for previous Activities.

LEARNING ACTIVITY XVI

The instructional evaluation plan submitted for this Activity as a result of participation in the seminar will provide the student with a broader view of instructional evaluation, from suggestions and recommendations made by other seminar participants. This Activity may be used by the instructor as a part of his evaluation for Activity XV when the course is completed.